WHAT IS CLAIMED IS:

1. An image reading apparatus for reading a light-transmission original, comprising

an area light source for irradiating light to said light-transmission original, comprising a light guide plate in which at least one of an LED device including red-, green-, and blue-LED chips is arranged to a peripheral side surface thereof.

2. An image reading apparatus for reading a light-transmission original, comprising:

a case the upper surface thereof having a transparent plate on which said light-transmission original is placed;

a contact image sensor provided in said case, which can be reciprocatedly moved for reading and scanning, said contact image sensor comprising an erect unity-magnification optical system and a line sensor; and

an area light source for irradiating light to said light-transmission original, provided upstream of said transparent plate, comprising a light guide plate in which at least one of an LED device including red-, green-, and blue-LED chips is arranged to a peripheral side surface thereof.

3. An image reading apparatus according to Claim 2, wherein, simultaneously with an operation for reading and

scanning by said contact image sensor, the red-, green-, and blue-LED chips are sequentially lit on.

4. An image reading apparatus according to Claim 3, further comprising:

a linear light source for irradiating light to a sheet original in said contact image sensor,

wherein said area light source is incorporated in an original cover, and

the light-transmission original is read by lighting on said area light source and the sheet original is read by lighting on said linear light source.

5. An image reading apparatus according to Claim 4, wherein the dimension of said area light source is equal to the sum of an integer multiple of the dimension of one frame of the light-transmission original and spaces between frames.

6. An image reading apparatus according to Claim 4, further comprising:

a light-on circuit which is shared to light on said area light source and said linear light source; and

a switch which is switched to transmit an output of said light-on circuit to said linear light source or said area light source.

7. An area light source for irradiating light to a light-transmission original in an image reading apparatus for reading the light-transmission original, comprising:

a light guide plate for scattering or reflecting light on a rear surface thereof;

a white bottom plate for covering the rear surface of said light guide plate;

a white case frame for covering a side surface of said light guide plate;

a scattering sheet for covering an upper surface of said light guide plate; and

at least one LED device including red-, green-, and blue-LED chips, which is arranged at a peripheral side surface of said light guide plate.

8. An area light source for irradiating light to a light-transmission original in an image reading apparatus for reading the light-transmission original, comprising:

a light guide plate for scattering or reflecting light on a rear surface thereof;

a white case for covering the rear surface and a side surface of said light guide plate;

a scattering sheet for covering an upper surface of said light guide plate; and

at least one LED device including red-, green-, and blue-LED chips, which is arranged at a peripheral side surface of said light guide plate.

9. An area light source according to Claim 7 or 8, wherein a dot pattern of a light scatterer is formed on a rear surface of said light guide plate.

10. An area light source according to Claim 9, wherein said dot pattern is a circular dot pattern.

11. A shading correcting apparatus for correcting the variation of sensitivities of a line sensor and the variation of illuminances of an area light source in an image reading apparatus according to Claim 2, comprising:

a correction coefficient calculating unit for calculating a correction coefficient for electrical weighting so that an output value of an electrical signal outputted by said line sensor becomes constant, by lighting on any of red-, green-, and blue-LED chips in said area light source, scanning an image in a state in which, on the transparent plate, there is no original or a semitransparent film is placed, and receiving light from said area light source;

a memory for storing said correction coefficient for a 2-dimensional position of each pixel in said line sensor and the light emission of the red-, green-, and blue-LED chips; and

a shading correcting unit for reading the correction coefficient from said memory upon actually reading an image

and multiplying the output value of the electrical signal of each pixel, which is outputted by said line sensor, to the correction coefficient corresponding to each pixel.

12. A shading correcting apparatus for correcting the variation of sensitivities of a line sensor and the variation of illuminances of an area light source in an image reading apparatus according to Claim 2, comprising:

a correction coefficient calculating unit for calculating a correction coefficient for electrical weighting so that an output value of an electrical signal outputted by said line sensor becomes constant, by lighting on any of red-, green-, and blue-LED chips in said area light source, scanning an image in a state in which, on the transparent plate, there is no original or a semitransparent film is placed, and receiving light from said area light source;

a memory for storing said correction coefficient for a 2-dimensional position of each pixel of said line sensor and the light emission of one or two LED chips of the red-, green-, and blue-LED chips and setting the correction coefficient stored for one or two LED chips to be a correction standard for the emission of the remaining LED chip; and

a shading correcting unit for reading the correction coefficient from said memory upon actually reading an image and multiplying the output value of the electrical signal

of each pixel, which is outputted by said line sensor, to the correction coefficient corresponding to each pixel.

13. A shading correcting apparatus according to Claim 11 or 12, wherein one correction coefficient calculated by said correction coefficient calculating unit is stored in said memory as one representative correction coefficient of one or more pixels in an adjacent pixel area.

14. A shading correcting apparatus according to Claim 13, wherein the number of pixels which is one or more is constant every said pixel area.

15. A shading correcting apparatus according to Claim 13, wherein the number of pixels which is one or more is different depending on said pixel area.

16. A shading correcting apparatus according to Claim 15, wherein an area having a small variation of output values of electrical signals of pixels has a larger number of said adjacent pixels to which one representative correction coefficient is used, as compared with an area having a large variation of output value of electrical signals of pixels.

17. A shading correcting apparatus according to Claim 11 to 12, wherein a correction coefficient of one pixel on

a predetermined line, which is calculated by said correction coefficient calculating unit, is stored in said memory as correction coefficients of all pixels, in a reading direction, which intersect with the pixel.

18. A shading correcting apparatus according to Claim 11 to 12, wherein an image reading range is limited and the correction coefficients of pixels are stored in said memory.

19. A shading correcting apparatus according to Claim 11 to 12, wherein said correction coefficient is a reciprocal number of the output value of the electrical signal, a value obtained by multiplying the reciprocal number of the output value of the electrical signal by a constant, or a value obtained by multiplying the reciprocal number of the output value of the electrical signal by an average of the electrical signals of pixels.

20. A shading correcting apparatus according to Claim 11 or 12, wherein said semitransparent film is a base film as a base material of the read film.

21. A shading correcting method for correcting the variation of sensitivities of a line sensor and the variation of illuminances of an area light source in an image reading apparatus according to Claim 2, comprising the steps of:

lighting on any of red-, green-, and blue-LED chips in said area light source, scanning an image by said contact image sensor in a state in which, on the transparent plate, there is no original or a semitransparent film is placed, and receiving light from said area light source and outputting an electrical signal by said line sensor;

calculating a correction coefficient for electrical weighting so that an output value of the electrical signal outputted by said line sensor becomes constant; and

storing said correction coefficient for a 2-dimensional position of each pixel in said line sensor and the light emission of the red-, green-, and blue-LED chips and using the stored correction coefficient upon actually reading the image.

22. A shading correcting method for correcting the variation of sensitivities of a line sensor and the variation of illuminances of an area light source in an image reading apparatus according to Claim 2, comprising the steps of:

lighting on any of red-, green-, and blue-LED chips in said area light source, scanning an image by said contact image sensor in a state in which, on the transparent plate, there is no original or a semitransparent film is placed, and receiving light from said area light source and outputting an electrical signal by said line sensor;

calculating a correction coefficient for electrical

weighting so that an output value of the electrical signal outputted by said line sensor becomes constant; and

storing said correction coefficient for a 2-dimensional position of each pixel in said line sensor and the light emission of one or two LED chips of the red-, green-, and blue-LED chips as a correction standard and using the stored correction coefficient for correction upon actually reading the image.

23. A shading correcting method according to Claim 21 or 22, wherein one correction coefficient calculated in said correction coefficient calculating step is stored in said storing step as a representative correction coefficient of one or more pixels in an adjacent pixel area.

24. A shading correcting method according to Claim 23, wherein the number of pixels which is one or more is constant every said pixel area.

25. A shading correcting method according to Claim 23, wherein the number of pixels which is one or more is different depending on said pixel area.

26. A shading correcting method according to Claim 25, wherein an area having a small variation of output values of electrical signals of pixels has a larger number of said adjacent pixels to which one representative correction

coefficient is used, as compared with an area having a large variation of output value of electrical signals of pixels.

27. A shading correcting method according to Claim 21 to 22, wherein a correction coefficient of one pixel on a predetermined line, which is calculated in said correction coefficient calculating step, is stored in said storing step as correction coefficients of all pixels, in a reading direction, which intersect with the pixel.

28. A shading correcting method according to Claim 21 to 22, wherein an image reading range is limited and the correction coefficients of pixels are stored in said storing step.

29. A shading correcting method according to Claim 21 to 22, wherein said correction coefficient is a reciprocal number of the output value of the electrical signal, a value obtained by multiplying the reciprocal number of the output value of the electrical signal by a constant, or a value obtained by multiplying the reciprocal number of the output value of the electrical signal by an average of the electrical signals of pixels.

30. A shading correcting method according to Claim 21 or 22, wherein said semitransparent film is a base film as

a base material of the read film.